HOLDEN MINE REMEDIATION PROJECT

Holden Mine Remediation construction update for September 2014

Barges continue to deliver equipment and materials about every other day. With so much work occurring, the contractor is going through 3,000 gallons of diesel fuel a day!

The first layer of cover soils has been placed along the northern slopes of the tailings piles. Tailings Pile No. 3 toe revetment/retaining wall work is complete. This will protect the tailings pile from being eroded by high stream flows in Railroad Creek.

Work continues on the Copper Creek pipe diversion on the south and geosynthetic clay liner bedding on the north of the Bypass road. Five large culverts, to accommodate future stream flows on Copper Creek through the Bypass road, are being installed.

The groundwater barrier wall construction is picking up speed with a second shift and three excavators working. A crane with an attached chisel is being used during excavation to break apart obstructions and loosen subsurface materials. The contractor is now on panel number 60 of 137 panels to be installed.

A site-wide winterization plan is being developed, as winter usually arrives early in this area of the forest. There are 180 construction crew workers on site. On October 1, an additional night crew will come on duty. This will make four crews working at the site--two day crews and two night crews. Personnel are trying to get as much work accomplished as they can before winter arrives and shuts down operations.

The "Big Picture" Plan…

There are three main tailings piles onsite, containing approximately 8.5 million tons of mine debris tailings and covering an area of roughly 75 acres. Portions of the tailings piles rose in heights of up to 120 feet above Railroad Creek. These steep slopes have now been re-graded and following jet grouting of Tailings Piles 2 and 3, will be stable under seismic conditions. Pulling the tailings back and proving riprap along the toe will prevent erosion of tailings into Railroad Creek. Once the full grading of both the tops and sides of the tailings piles is completed, the area will be capped with a soil cover and planted with native vegetation.

Another main component of the remedy is the barrier wall between the tailings and Railroad Creek. The barrier wall is being constructed underground to collect ground water that currently seeps through the tailings/waste rock piles and into Railroad Creek. Once completed, the barrier wall will collect water, which will then be transported to a water treatment plant to remove heavy metals before releasing the water back into Railroad Creek. The underground barrier wall averages three feet wide and can range from 40 to over 90 feet deep.

for the greatest good

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Excavations in north Copper Creek subgrade are prepared to install pressure relief drains.

Installing Copper Creek geosynthetic clay liner system with cushion layers. Geosynthetics are generally synthetic plastic products used to solve engineering problems.

Deploying geosynthetic clay liner and cushion layers. Barrier wall progress can be seen in the background.

Artifacts uncovered during road widening near the historic Winston Site.

North Copper Creek channel prepared to receive channel-lining riprap.

Ore cart wheels discovered during East Waste Rock Pile excavation and grading.

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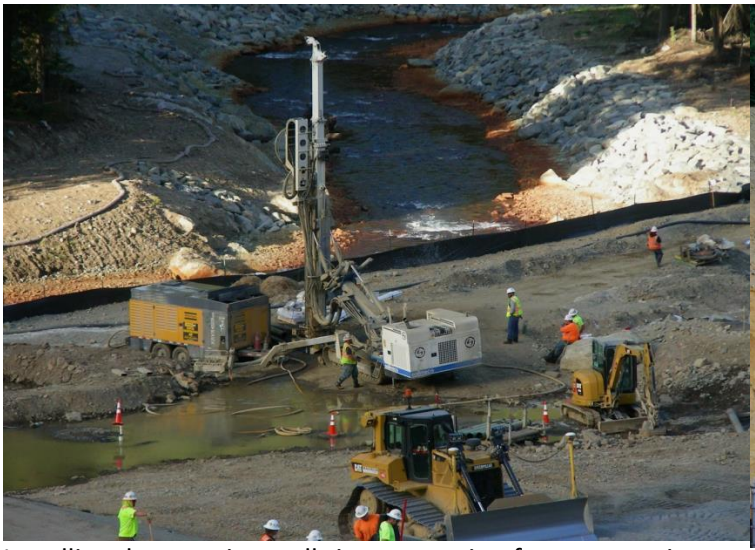
Dam used to divert Copper Creek during channel reconstruction.

Initial riprap being placed over filter layers at North Copper Creek; water diversion pipes in the background.



Installing de-watering wells in preparation for constructing the groundwater collection system at Copper Creek.

Coring operations at the trial jet grout columns prior to exhuming for inspection.

Dumping and spreading screened borrow soil for tailings pile cover and growth media.

24-inch transmission pipes prepared to divert water for south Copper Creek construction.